

M/S E.R. TECHNOLOGIES

(Govt. Contractor of PH & Civil Works & Electrical Works)

(Specialist in: Deep Tube well, Sick Tube well, Geological and Hydro-Geological Survey, Electric Logging of Borehole, Videography of Borehole, Water Sample & Soil Testing etc.

Ref.

04/11/2023 Dated

REPORT OF ELECTRIC LOGGING OF BOREWELL DRILLED AT SITE VILLLAGE KULHERI, BLOCK NAKUR, DISRICT SAHARANPUR, UTTAR PRADESH UNDER JAL JEEVAN MISSION

Introduction:

The borehole at the site was drilled to a depth of 165.00 meters, and the electric logging was conducted up to 158.00-meter depth using a continuous logger on Oct 27, 2023. The purpose of this logging was to assess the various subsurface strata and properties encountered during drilling, with a focus on resistivity measurements (LON -64" and SHN-16) and self-potential (SP) data. This report provides an analysis of the interpreted data and offers recommendations for further actions under the Jal Jeevan Mission.

| Name of agency | GA Infra. Pvt Ltd |
|----------------------------|-------------------|
| Location | Kulheri |
| Block | Nakur |
| District | Saharanpur, U.P |
| Depth drilled (mbgl) | 165 |
| Depth logged (mbgl) | 158 |
| Water level (m) | 15 |
| LON -64" Resistivty (N-64) | Ohm.m (Blue) |
| SHN-16 Resistivity (N-16) | Ohm.m (Red) |
| Self-Potential (SP) | Mv (Green) |

| Village Kulheri, Block Nakur , District Saharanpur, U.P | | | | | | | | |
|---|-----------------|--------|----------------------|--------------------------------------|--------------------|------------------------------|--|--|
| Sr. No | Depth Range (m) | | Zone Thickness(m) | LON -64" N Resistivity (ohm.m) | Probable Strata | Expected water Quality | | |
| | From | То | | | | | | |
| 1 | 0.00 | 6.00 | 6.00 | <20 | Top Soil | - | | |
| 2 | 6.00 | 13.00 | 7.00 | 55 | Medium Coarse Sand | - | | |
| 3 | 13.00 | 40.00 | 27.00 | 29 | Clay | - | | |
| 4 | 40.00 | 63.00 | 23.00 | 65 | Coarse Sand | - | | |
| 5 | 63.00 | 67.00 | 4.00 | 28 | Clay | - | | |
| 6 | 67.00 | 77.00 | 10.00 | 68 | Coarse Sand | Good | | |
| 7 | 77.00 | 80.00 | 3.00 | 32 | Clay | - | | |
| 8 | 80.00 | 84.00 | 4.00 | 64 | Coarse Sand | Good | | |
| 9 | 84.00 | 90.00 | 6.00 | 36 | Clay | - | | |
| 10 | 90.00 | 95.00 | 5.00 | 61 | Coarse Sand | Good | | |
| 11 | 95.00 | 98.00 | 3.00 | 29 | Clay | - | | |
| 12 | 98.00 | 113.00 | 15.00 | 68 | Coarse Sand | Good | | |
| 13 | 113.00 | 115.00 | 2.00 | 28 | Clay | - | | |
| 14 | 115.00 | 119.00 | 4.00 | 69 | Coarse Sand | Good | | |

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Dated 04/10/2023

Village Kulheri, Block Nakur , District Saharanpur, U.P

| 15 | 119.00 | 124.00 | 5.00 | 30 | Clay | - |
|----|--------|--------|-------|----|-------------|------|
| 16 | 124.00 | 131.00 | 7.00 | 72 | Coarse Sand | Good |
| 17 | 131.00 | 134.00 | 3.00 | 25 | Clay | - |
| 18 | 134.00 | 145.00 | 11.00 | 70 | Coarse Sand | Good |
| 19 | 145.00 | 152.00 | 7.00 | 40 | Fine Sand | - |
| 20 | 152.00 | 158.00 | 6.00 | 25 | Clay | - |

Recommendations:

Based on the interpreted strata data from the electric logging, the following recommendations are provided:

1. Screen Installation:

It is recommended to install screens against the **bold-marked strata** indicated in the interpretation above. These screens will help facilitate water inflow from the identified permeable zones.

2. Expected Water Quality:

The expected water quality in the zones marked as "Good" is anticipated to be favorable.

3. Tubewell Development:

To optimize water yield, it is advised to develop the tubewell using a high-capacity air compressor.

Interpretation Done By...

PARKASH KUMAR Hydrogeologist

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